

Flagstaff MSA TERM Report by CIP Program

Training & Education Resource Model

Based on 2006-2008 occupational projections, Education & Training levels 1-11 (no restrictions)

Score = average of the five percentiles, using weights 3, 3, 1, 1, 1

Rank	CIP Code	CIP Title	P e r c e n t i l e s						Labor Market Data					BLS Ed & Train Code
			Score	Open-ings	Wage	ONET	Growth Rate	Turn-over Ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate	Turn-over Ratio	
1	52.02	Business Administration, Management and Operations	79.9	78	89	89	59	68	49	27.31	661	1.8	1.1	6.4
2	13.12	Teacher Education and Professional Development, Specific Levels and Methods	77.5	92	57	65	95	92	97	17.32	613	3.3	1.8	5.2
3	43.01	Criminal Justice and Corrections	76.6	70	76	92	84	76	36	20.24	672	2.5	1.2	9.1
4	51.16	Nursing	76.0	65	92	76	65	73	26	27.96	648	2.1	1.1	5.9
5	13.13	Teacher Education and Professional Development, Specific Subject Areas	67.6	73	51	68	89	78	37	17.16	634	3.0	1.3	5.1
6	49.02	Ground Transportation	63.1	86	32	54	70	86	66	14.22	580	2.2	1.6	10.5
7	52.99	Business, Management, Marketing, and Related Support Services, Other	60.7	43	84	51	68	46	14	22.04	580	2.2	0.9	9.0
8	47.06	Vehicle Maintenance and Repair Technologies	60.4	68	43	62	78	70	27	16.92	595	2.5	1.1	8.0
9	51.06	Dental Support Services and Allied Professions	59.3	34	70	59	73	89	13	18.49	593	2.3	1.8	9.0
10	44.04	Public Administration	58.3	16	97	78	46	59	11	38.51	653	1.6	1.0	4.2
10	52.19	Specialized Sales, Merchandising, and Marketing Operations (NEW)	58.3	57	78	49	41	30	14	20.62	574	1.4	0.6	8.9
12	52.07	Entrepreneurial and Small Business Operations	56.5	0	100	86	57	65	10	39.55	660	1.7	1.0	4.1
13	43.02	Fire Protection	56.3	34	41	100	100	84	13	15.71	753	4.2	1.5	9.0
14	52.01	Business/Commerce, General	56.2	3	95	70	62	81	10	30.09	640	1.8	1.4	4.6
15	46.05	Plumbing and Related Water Supply Services	53.2	54	62	81	30	19	14	17.92	657	1.2	0.4	9.7
16	46.02	Carpenters	52.0	59	68	73	5	8	16	17.95	644	0.1	0.2	9.3
17	46.04	Building/Construction Finishing, Management, and Inspection	51.7	84	30	46	38	41	53	13.91	573	1.4	0.8	9.9
18	51.07	Health and Medical Administrative Services	51.1	81	38	24	35	43	49	15.15	520	1.3	0.8	8.9
19	52.17	Insurance (NEW)	50.5	38	73	35	49	38	13	19.76	543	1.6	0.6	8.6
20	46.03	Electrical and Power Transmission Installers	49.6	24	81	97	16	16	12	20.67	687	0.8	0.4	8.9

Rank	CIP Code	CIP Title	Percentiles						Labor Market Data					BLS Ed & Train Code
			Score	Open-ings	Wage	ONET	Growth Rate	Turn-over Ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate	Turn-over Ratio	
20	52.03	Accounting and Related Services	49.6	76	54	3	22	32	42	17.26	490	1.0	0.6	8.8
20	52.04	Business Operations Support and Assistant Services	49.6	95	24	14	27	49	113	13.05	501	1.1	0.9	10.4
23	15.05	Environmental Control Technologies/Technicians	49.2	22	49	84	86	62	12	17.14	659	2.9	1.0	9.0
23	15.08	Mechanical Engineering Related Technologies/Technicians	49.2	5	65	95	81	57	11	17.92	685	2.5	0.9	6.8
25	51.08	Allied Health and Medical Assisting Services	48.6	49	19	38	97	100	14	11.22	549	3.4	2.3	9.1
26	01.06	Applied Horticulture/Horticultural Business Services	46.5	89	22	8	43	35	89	11.31	500	1.6	0.6	10.8
27	01.01	Agricultural Business and Management	44.1	19	59	57	54	51	12	17.40	590	1.7	0.9	8.8
28	52.08	Finance and Financial Management Services	42.0	62	46	11	19	24	25	17.01	501	1.0	0.5	9.2
29	52.18	General Sales, Merchandising and Related Marketing Operations (NEW)	40.8	97	11	16	14	14	290	9.89	506	0.7	0.2	10.7
30	13.15	Teaching Assistants/Aides	40.2	49	8	5	92	95	14	9.24	494	3.0	1.8	11.0
31	52.15	Real Estate	38.0	9	86	43	8	3	11	22.84	559	0.2	0.1	5.7
32	12.04	Cosmetology and Related Personal Grooming Services	34.8	49	14	22	51	54	14	10.43	520	1.6	0.9	7.0
33	12.05	Culinary Arts and Related Services	33.6	100	0	0	3	0	439	7.84	481	0.1	0.0	10.7
34	51.26	Health Aides/Attendants/Orderlies	27.2	9	5	27	76	97	11	9.01	521	2.4	2.0	11.0
35	52.09	Hospitality Administration/Management	25.8	30	35	32	0	5	13	14.50	533	0.1	0.2	9.2
36	19.07	Human Development, Family Studies, and Related Services	25.5	41	3	41	32	27	14	8.62	552	1.3	0.6	10.6
37	19.05	Foods, Nutrition, and Related Services	22.8	27	16	30	24	22	13	11.19	532	1.0	0.4	9.1
38	46.01	Mason/Masonry	18.0	14	27	19	11	11	11	13.75	514	0.3	0.2	9.4

Explanations for Each Column of the TERM Report		
Column		Explanation
A	Rank	This is the rank of the CIP (Classification of Instructional Program) by percentile score as shown in column D. Tie scores get tie ranks. Sometimes scores appear to be a tie, but if carried out to more decimal places, are not. Such CIPs are not assigned tie ranks.
B	CIP Code	CIP (Classification of Instructional Programs) code as assigned by the U.S. Department of Education. See Sources note below for more details.
C	CIP Title	The title of the training program, as assigned by the U.S. Department of Education Classification of Instructional Programs.
D	Score	The score is a weighted average of columns E through I. The weights used are 3, 3, 1, 1, 1, respectively. See Calculation Method note below for more details.
E-I	Percentiles	These 5 columns are the percentile scores of the data in columns J through N. Percentiles scores are used to compute different types of data in the model. For example, wages in dollars and growth in percentages. Tie scores produce tie percentiles.
J	Openings	The projected number of openings expected per year for the occupations within this CIP. If an occupation is contained in more than one CIP, its openings are distributed evenly among those CIPs. Projected openings based on 2006-2008 occupation projections.
K	Hourly Wage	The average of the wages of the occupations contained in this CIP, weighted by the number of openings in each occupation. Wages based on 2006 Occupational Employment Statistics (OES) survey.
L	O*NET Score	O*NET is an acronym for the Occupational Information Network (http://www.onetcenter.org/). This data is a measure of the skills, knowledge, and abilities required for the occupations within this CIP, weighted by the number of openings in each occupation. The numerical score for each comparative occupational descriptor in the O*NET Knowledge, Skills, and Abilities data files were summed for each occupation. See Sources note below for more information.
M	Growth Rate	The two-year projected rate of growth in employment of the occupations in this CIP, weighted by the number of openings in each occupation. This number could be negative but usually is not. Occupational growth rate is from the 2006-2008 Occupational Projections produced by the AzDES Research Administration.
N	Turnover Ratio	This is the projected number of annual openings due to growth divided by the projected number of annual openings due to replacement (like retirements, quits, promotions, etc.). Higher ratios indicate lower turnover. Based on the 2006-2008 occupational projections data.
O	BLS Education & Training Code	The job training and educational levels as assigned by the Bureau of Labor Statistics (BLS). See detailed descriptions of the BLS codes on page two of these notes. Note that higher numbers indicate lower amounts of education or training time.

Sources	
1	Openings and wage data are produced by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics. Wages are from the 2006 OES survey, and openings are from the 2006-2008 occupational employment projections.
2	For the O-Net score, the O-Net database, www.onetcenter.org/database.html , version 11.0, was used.
3	CIP / SOC crosswalk source: National Crosswalk Service Center http://www.xwalkcenter.org/xwxwalk.html#SOCCIP
4	The education levels are from the Bureau of Labor Statistics website at ftp://ftp.bls.gov/pub/special.requests/ep/optddata/
Calculation method	
1	Hourly wages were calculated by dividing annual wages by 2080.
2	All scores were first calculated by occupation using the SOC (Standard Occupational Code). The scores for each 6-digit SOC were calculated by averaging the scores for the 8-digit SOC's that comprise each 6-digit SOC.
3	In this iteration of the TERM, there were no restrictions on the BLS Training and Educational code. Note that the lower the training and educational time requirement, the higher the code numbers (see below).
4	Statistics by CIP (Classification of Instructional Programs) (except openings) were calculated by taking an openings-weighted average of the occupations in the CIP. For occupations appearing in more than one CIP, openings were evenly distributed among the CIPs. For example, if an occupation had 30 openings and was found in 3 CIPs, that occupation would be listed as having 10 openings in each of the 3 CIPs. After the openings were distributed in this manner, the number of openings in each CIP was calculated by summing the openings for each occupation within the CIP.
5	Percentiles were calculated for each statistic shown. In case of a tie, the same percentile was assigned to all CIP's involved in the tie.
6	The following formula determined the score for each CIP: $(3 \times \text{openings percentile} + 3 \times \text{wage percentile} + \text{ONET percentile} + \text{growth percentile} + \text{ratio percentile}) / 9$
BLS Education Codes	
1	First professional degree
2	Doctoral degree
3	Master's degree
4	Bachelor's or higher degree, plus work experience
5	Bachelor's degree
6	Associate degree
7	Post-secondary vocational training
8	Work experience in related occupation
9	Long-term on-the-job training
10	Moderate-term on-the-job training
11	Short-term on-the-job training
Questions and Comments	
	Direct questions or comments to Rick Van Sickle, 602-542-6481, John Graeflin, 602-542-6492, or Don Wehbey, 602-542-3686, at Research Administration, Arizona Department of Economic Security.